

REMARKS

Reconsideration of this application, as amended, is respectfully requested. The following remarks are responsive to the Office Action mailed October 4, 2004.

Claim Objections

In the Office Action mailed, October 4, 2004, Claim 18 is objected to because it contains the phrase "signal quality", which is alleged by the Office Action to be indefinite. The phrase "signal quality" has been removed from the currently amended claims in favor of language that more clearly articulates certain aspects of at least one embodiment of the invention.

Accordingly, Applicant respectfully submits that the objection has been overcome and that claim 18 is presently in condition for allowance.

Claim Rejections

Claims 18-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,045,781 to Levy et al. in view of U.S. Patent 5,319,591 to Takeda et al. Specifically, it is asserted in the Office Action that Levy teaches a memory module having devices of "diverse characteristics" (col. 2, lines 20-43). Levy does not define what is meant by the term "diverse characteristics", but instead illustrates what is meant by the term "diverse characteristics" by way of example. Specifically, Levy discloses that the memory module may contain magnetic core memory units or semiconductor random access memory units.

However, Levy does not describe whether the magnetic core or semiconductor random access memory units may have different signal impedance or operating voltage requirements from those of the system memory bus, as presently claimed by Applicant in claim 18. Moreover, Levy does not describe whether the memory module contains a controller that may allow data to be communicated between the system memory bus and the memory units regardless of any difference between the signal impedance or operating voltage of the system memory bus and the memory units, as presently claimed in claim 18.

One may pontificate whether the magnetic core and semiconductor random access memory units of Levy may have different impedance or operating voltage characteristics, but Levy does not teach or suggest whether they do in fact have different impedance or operating voltage characteristics nor whether the memory controller in the memory module enables data communication between the system memory bus and the memory units regardless of any difference in impedance or operating voltage between the memory units and the system memory bus, as in presently amended claim 18. Therefore, Levy cannot be used as a basis for the rejection under 35 USC §103(a) of claim 18.

Similarly, Takeda does not teach a memory controller in the memory module of Takeda that enables data communication between the system memory bus and the memory units regardless of any difference in impedance or operating voltage between the memory units and the system memory bus, as in presently amended claim 18. As the Office Action states, Takeda suggests that it is an object to provide an improved memory module having a structure or arrangement which can be manufactured without

regard to compatibility in temperament or characteristics between the respective memory devices. However, Takeda does not suggest what exactly those temperament or characteristics are nor whether they are different from the system memory bus to which the memory module of Takeda is to be coupled. Takeda only mentions in column 5, lines 11-45 (as cited in the Office Action), that the memory devices within the memory module may have different "voltage noise" magnitudes or waveforms from each other.

Therefore, Takeda may not be used as a basis for a rejection under 35 USC §103(a) of presently amended claim 18, nor does the combination of Levy and Takeda teach presently amended claim 18. Furthermore, nothing within either Levy or Takeda suggests or provides motivation for combining the two references, such that the combination of Levy and Takeda would teach that which is claimed in presently amended claim 18.

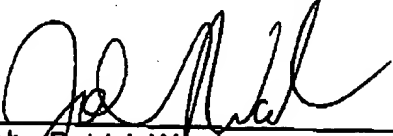
Accordingly, Applicant respectfully submits that the rejection of claim 18, as presently amended, is overcome and that claims 18-30 are now in condition for allowance.

If there are any additional fees due, please charge them to our Deposit Account
No. 02-2666.

Respectfully submitted,

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